BISS Biodiversity Information Science and Standards

Biodiversity Information Science and Standards 7: e112176
doi: 10.3897/biss.7.112176

OPEN ACCESS

Conference Abstract

Will a Local Portal using Global Data Encourage the Mainstreaming of Biodiversity Informatics in Asia? In Taiwan, We Say Yes

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Received: 04 Sep 2023 | Published: 06 Sep 2023

Citation: Ko JC-J, Chang H, Chang Y, Yu Y-C, Ni M-H, Wu J-Y, Chen YZ (2023) Will a Local Portal using Global Data Encourage the Mainstreaming of Biodiversity Informatics in Asia? In Taiwan, We Say Yes. Biodiversity Information Science and Standards 7: e112176. https://doi.org/10.3897/biss.7.112176

Abstract

Five years ago, the value of biodiversity open data was scarcely recognized in Taiwan. This posed a significant challenge to the Taiwan Biodiversity Infomation Facility (TaiBIF), our national node of the Global Biodiversity Information Facility (GBIF), in its sustained efforts to enhance data publishing capacities. Notably, non-academic entities, both governmental and industrial, were reluctant to invest resources in data management and publication, questioning the benefits beyond purely research-oriented returns.

At the time, Taiwan had fewer than a million published records domestically, while GBIF held around 3 million occurrence records for Taiwan, largely unused by local users. We speculated that this discrepancy in data usage stemmed from three factors: (1) lack of species names in the local language within the occurrence data, (2) missing locally important species attributes, such as conservation status and national red list categories, and (3) absence of a culturally relatable local portal promoting biodiversity data usage.

To address these issues, we launched the Taiwan Biodiversity Network (TBN) website in 2018, localizing global data from GBIF and integrating missing information from local data sources. Collaborating with wildlife illustrators, we designed a user-friendly data interface

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to lessen the system's technical or academic barriers. This effort led to a doubling of website visitors and data download requests annually, and in recent years, biodiversity open data has become a vital component in environmental impact assessments. This upward trend heightened the recognition of the value of biodiversity open data, inciting organizations, such as initially data-conservative government agencies and private sectors with no obligatory data-sharing, to invest in data management and mobilization. This advancement also catalyzed the formation of the Taiwan Biodiversity Information Alliance (TBIA), actively promoting cross-organizational collaborations on data integration.

Today, Taiwan offers more than 19 million globally accessible occurrence records and data for more than 28,000 species. While the surge in data volume can certainly be credited to the active local citizen science community, we believe the expanded coverage of species and data types is a result of a growing community supportive of biodiversity open data. This was made possible by the establishment of a local portal that effectively bridged the gap between global data and local needs. We hope our experience will motivate other Asian countries to create analogous local portals using global open data sources like GBIF, illustrating the value of biodiversity open data to decision-makers and overcoming resource limitations that impede investments in biodiversity informatics.

Keywords

Taiwan Biodiversity Network, species list, data visualization, user support

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Presented at

TDWG 2023

Conflicts of interest

The authors have declared that no competing interests exist.